

Amendments to the Claims

1. (Original) A lamphead for use in semiconductor processing, comprising:
 - a monolithic member; and
 - a plurality of lamp receptacles and reflector cavities formed in the monolithic member, each lamp receptacle adapted to support a lamp and each reflector cavity shaped to act as a reflector for the lamp.
2. (Original) The lamphead of claim 1, further comprising:
 - a plurality of coolant passages formed in the monolithic member.
3. (Original) The lamphead of claim 1, wherein the monolithic member comprises at least one of copper and aluminum.
4. (Original) The lamphead of claim 1, further comprising:
 - a reflective coating upon a surface of each reflector cavity.
5. (Original) The lamphead of claim 4, wherein the reflective coating comprises at least one of gold and a dielectric stack on a gold layer.
6. (Previously presented) The lamphead of claim 1, further comprising:
 - a plurality of lead passages formed in the monolithic member, each lead passage extending between one of the plurality of the lamp receptacles and one of the plurality of the reflector cavities, and adapted to receive a portion of a lamp.
7. (Currently amended) A lamphead assembly for use in semiconductor processing, comprising:

a ~~monolithic member~~ lamphead;

a plurality of lamp receptacles and reflector cavities formed in the ~~monolithic member~~ lamphead, each lamp receptacle adapted to support a lamp and each reflector cavity shaped to act as a reflector for the lamp;

at least one lampholder having receptacles for outer leads of a lamp;

a ferrofluid; and

one or more magnets disposed about the lampholder and maintaining position of the ferrofluid near the receptacles;

such that when outer leads of a lamp are inserted into the lamphold receptacles, the ferrofluid surrounds the outer leads thereby suppressing arcing between the outer leads.

8. (Currently amended) The lamphead assembly of claim 7, wherein:

the outer leads of the lamp are magnetic, such that the magnets maintain position of the lamp.

9. (Original) A semiconductor processing system, comprising:

a process chamber having a support on which a substrate may be positioned during processing; and

a monolithic lamphead having a plurality of lamp receptacles and reflector cavities formed therein, each lamp receptacle adapted to support a lamp and each reflector cavity shaped such that the lamps direct radiant energy onto a substrate on the support.

10. (Previously presented) The semiconductor processing system of claim 9, further comprising:

a plurality of coolant passages formed in the monolithic lamphead near the reflector cavities.

11. (Original) The semiconductor processing system of claim 9, further comprising:

a reflective coating upon a surface of each reflector cavity.

12. (Previously presented) The semiconductor processing system of claim 9, further comprising:

a plurality of lead passages formed in the monolithic lamphead, each lead passage in communication with one of the plurality of lamp receptacles and adapted to receive a lamp seal.

13. (Currently amended) A semiconductor processing system, comprising:

a process chamber having a support on which a substrate may be positioned during processing;

a ~~monolithic~~ lamphead having a plurality of lamp receptacles and reflector cavities formed therein, each lamp receptacle adapted to support a lamp and each reflector cavity shaped such that the lamps direct radiant energy onto a substrate on the support;

at least one lampholder having receptacles for outer leads of a lamp;

a ferrofluid; and

one or more magnets disposed about the lampholder and maintaining position of the ferrofluid near the receptacles;

such that when outer leads of a lamp are inserted into the lampholder receptacles, the ferrofluid surrounds the outer leads thereby suppressing arcing between the outer leads.

14. (Previously presented) The semiconductor processing system of claim 13, wherein:

the outer leads of the lamp are magnetic, such that the magnets maintain position of the lamp.

15. (Original) An apparatus for processing a substrate, comprising:

a process chamber having a support on which a substrate may be positioned during processing; and

a monolithic lamphead having a plurality of lamp receptacles and reflector cavities

formed therein, each lamp receptacle adapted to support a lamp and the reflector cavities shaped such that the lamps direct radiant energy onto a substrate on the support.

16. (Original) The apparatus of claim 15, further comprising:

a plurality of coolant passages formed in the monolithic lamphead.

17. (Original) The apparatus of claim 15, further comprising:

a reflective coating upon a surface of each reflecting cavity.

18. (Previously presented) The apparatus of claim 15, further comprising:

a plurality of lead passages formed into the monolithic lamphead, each lead passage in communication with one of the plurality of lamp receptacles and adapted to receive a lamp seal.

19. (Currently amended) An apparatus for processing a substrate, comprising:

a process chamber having a support on which a substrate may be positioned during processing;

a ~~monolithic~~ lamphead having a plurality of lamp receptacles and reflector cavities formed therein, each lamp receptacle adapted to support a lamp and the reflector cavities shaped such that the lamps direct radiant energy onto a substrate on the support;

at least one lampholder having receptacles for outer leads of a lamp;

a ferrofluid; and

one or more magnets disposed about the lampholder and maintaining position of the ferrofluid near the receptacles;

such that when outer leads of a lamp are inserted into the lampholder receptacles, the ferrofluid surrounds the outer leads thereby suppressing arcing between the leads.

20. (Previously amended) The apparatus of claim 19, wherein:

the outer leads of the lamp are magnetic, such that the magnets maintain position of the

lamp.

21. (Currently amended) The lamphead assembly of claim 7, further comprising:
a plurality of coolant passages formed in the ~~monolithic member~~ lamphead.
22. (Currently amended) The lamphead assembly of claim 7, wherein the ~~monolithic member~~ lamphead comprises at least one of copper and aluminum.
23. (Currently amended) The lamphead assembly of claim 7, further comprising:
a reflective coating upon a surface of each reflector cavity.
24. (Currently amended) The lamphead assembly of claim 23, wherein the reflective coating comprises at least one of gold and a dielectric stack on a gold layer.
25. (Currently amended) The lamphead assembly of claim 7, further comprising:
a plurality of lead passages formed in the monolithic member, each lead passage extending between one of the plurality of the lamp receptacles and one of the plurality of the reflector cavities, and adapted to receive a portion of a lamp.
26. (Currently amended) The semiconductor processing system of claim 13, further comprising:
a plurality of coolant passages formed in the ~~monolithic~~ lamphead near the reflector cavities.
27. (Previously presented) The semiconductor processing system of claim 13, further comprising:
a reflective coating upon a surface of each reflector cavity.

28. (Currently amended) The semiconductor processing system of claim 13, further comprising:

a plurality of lead passages formed in the ~~monolithic~~ lamphead, each lead passage in communication with one of the plurality of lamp receptacles and adapted to receive a lamp seal.

29. (Currently amended) The apparatus of claim 19, further comprising:

a plurality of coolant passages formed in the ~~monolithic~~ lamphead.

30. (Previously presented) The apparatus of claim 19, further comprising:

a reflective coating upon a surface of each reflecting cavity.

31. (Currently amended) The apparatus of claim 19, further comprising:

a plurality of lead passages formed into the ~~monolithic~~ lamphead, each lead passage in communication with one of the plurality of lamp receptacles and adapted to receive a lamp seal.

32. (New) The lamphead of claim 1, wherein said monolithic member consists of a single piece.

33. (New) The lamphead of claim 32, wherein said reflector cavities are machined into said single piece.

34. (New) The semiconductor processing system of claim 9, wherein said monolithic lamphead consists of a single piece.

35. (New) The semiconductor processing system of claim 34, wherein said reflector cavities are machined into said single piece.

36. (New) The apparatus of claim 15, wherein said monolithic lamphead consists of a single

piece.

37. (New) The apparatus of claim 36, wherein said reflector cavities are machined into said single piece.

38. (New) The lamphead assembly of claim 7, wherein said lamphead consists of a monolithic member.

39. (New) The semiconductor processing system of claim 13, wherein said lamphead is a monolithic lamphead.

40. (New) The apparatus of claim 19, wherein said lamphead is a monolithic lamphead.